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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/727,458	12/04/2000	Jonathan Kleinsasser	80215-1402 ADB	6566

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EXAMINER

WALLENHORST, MAUREEN

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/727,458	Applicant(s) KLEINSASSER, JONATHAN	
	Examiner Maureen M. Wallenhorst	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) 1-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 9-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-18 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

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1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-8, drawn to a biological sample storage rack, classified in class 422, subclass 104.
 - II. Claims 9-18, drawn to a semen storage rack and method of storing semen, classified in class 422, subclass 104.
2. The inventions are distinct, each from the other because:

Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation. The invention of Group I operates to rotate a housing about a horizontal axis, whereas the invention of Group II operates to tilt a plurality of racks located on a frame in a refrigerator.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.
3. During a telephone conversation with Adrian Battison on February 25, 2004, a provisional election was made without traverse to prosecute the invention of Group II, claims 9-18. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-8 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed

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250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because of the inclusion of legal phraseology such as "comprises". Correction is required. See MPEP § 608.01(b).

6. The disclosure is objected to because of the following informalities: On page 1, line 4 of the specification after the phrase "filed October 12, 1999", the following phrase should be inserted so as to update the status of the parent application: --, now abandoned--.

Appropriate correction is required.

7. Claims 9-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

On line 2 of claim 9, the phrase "arranged to be located within a refrigerator" is indefinite since the recitation that an element is arranged to perform a certain function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. See this same problem with the phrase "arranged to contain semen" on line 6 of claim 9. On line 9 of claim 9, the phrase "the container" should be changed to --the at least one container--so as to be consistent with the terminology used earlier in the claim.

On line 3 of claim 17, the phrase "the fluid" lacks antecedent basis.

On line 1 of claim 18, it is suggested to change the word "includes" to --comprising the steps of--since claim 18 recites a method. Claim 18 is indefinite since it does not positively

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recite the placement of the storage tubes holding the semen into the carrier. Rather, claim 18 only generically recites the provision of a carrier for a plurality of storage tubes, not the step of placing the storage tubes containing semen into the carrier and then placing the carrier on the rack in the refrigerator.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 9 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Dschida.

Dschida teaches of an apparatus for mixing the contents of microcentrifuge tubes.

Dschida teaches that it is important in many aspects of biological and chemical testing to resuspend and mix small volumes of samples held in microcentrifuge tubes. The apparatus comprises a frame 80 as depicted in Figures 9a and 9b with a series of rocker pins 70 along the sides of the frame at spaced intervals acting as racks that serve to hold a plurality of trays 20 in the frame. The trays 20 each contain holes 64 therein for holding a plurality of microcentrifuge tubes 10. The rocker pins 70 are connected to a vertical pin 72 that projects downward and a recoil mechanism 74 that acts on the pin 72 to quickly pull the vertical pin 72 back to its original position. See Figure 7 in Dschida. A reciprocating table 24 with attached ribs 18 is located in the frame 80 underneath the plurality of trays 20. In operation of the mixing device, the upright ribs 18 on the table 24 move back and forth to produce a thumping action of the tubes 10. The

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base plate 24 with attached ribs 18 moves forward toward the vertical pins 72. The ribs 18 come into contact with the vertical pins 72, and the pins are pulled to the limit of the ribs 18. The trays 20 pivot on the rocker pins 70. The vertical pins 72 are then released and the recoil mechanism 74 acts on the pins 72 to quickly return the pins 72 and trays 20 to their original, vertical position. The base plate 24 with attached ribs 18 then reverses direction and again comes into contact with the vertical pins 72. The pins are again pulled to the limit of the ribs 18 causing the trays 20 to pivot in the opposite direction. Thus, the plurality of racks or pins 70 with attached trays 20 are pivotally mounted to the frame 80 and arranged to tilt thereon. See Figures 8a-8f and lines 1-21 in column 5 of Dschida. A drive mechanism in the form of a motor 34 serves to move the base plate 24 in a back and forth motion. The motor 34 is attached to a wheel 32 through a motor shaft 42. An arm 28 is attached to the wheel 32 and sliding base plate 24 by connecting pins 30. See Figure 10 in Dschida. This assembly of motorized parts serves to provide upwards and downwards rocking motion to each of the trays 20 in the frame 80. While Dschida does not specifically teach that the microcentrifuge tubes hold semen, this limitation in the instant claims is merely an intended use of the device which the device taught by Dschida would be capable of performing since the device of Dschida meets all of the structural limitations of the semen storage rack recited in instant claims 9 and 16.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 10-12 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dschida in view of Coulter et al (US Patent no. 4,609,017). For a teaching of Dschida, see previous paragraphs in this Office action. Dschida fails to teach that the racks of trays 20 in the device can be stacked one on top of the other at spaced intervals and that the microcentrifuge tubes can be held horizontally in the trays so that the fluid in the tubes can be mixed end to end in the containers upon tilting in the frame.

Coulter et al teach of a method and apparatus for transporting and mixing a plurality of sealed blood sample tubes. These tubes are housed on a plurality of racks 12 that are vertically stacked one on top of the other at regular intervals. The sample tubes 34 are held in the racks 12 horizontally. The racks 12 are successively deposited onto a horizontal conveyor belt, which is housed in and moves longitudinally on a table that rocks around its longitudinal axis to mix the samples in a semi-inverting mode from end to end. See Figure 2, the abstract and claims 1-3 of Coulter et al.

Based upon the combination of Dschida and Coulter et al, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to stack the racks of trays 20 in the device taught by Dschida one on top of the other in a vertically spaced arrangement on the

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frame 80 rather than next to one another since Coulter et al teach that this arrangement of a plurality of racks of tubes in a mixing apparatus serves to save space and allow more racks of tubes to be processed and analyzed at one time. It also would have been obvious to one of ordinary skill in the art to place the microcentrifuge tubes taught by Dschida horizontally in the trays 20 so that the fluid in the tubes can be mixed end to end upon tilting the trays in the frame 80 since Coulter et al discloses this arrangement to be an effective means of mixing a biological/chemical sample to ensure that none of the sample adheres to any portion of the walls of the tubes.

13. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dschida in view of Applicant's admitted prior art and Wiesman. For a teaching of Dschida, see previous paragraphs in this Office action. Dschida fails to teach of using the mixing apparatus in a method to store semen samples in a refrigerator.

Applicant admits in the Background of the invention on page 1 of the instant specification that it is known to collect samples of boar semen and store them in tubes. It is also known to be desirable to periodically rotate and mix the tubes to prevent settling of particulates in the semen samples to the bottom of the tubes. Wiesman teaches of a container for collecting, storing and transporting semen samples. Wiesman teaches that semen samples must be refrigerated and kept cool when stored and transported in order to remain viable.

Based upon the combination of Dschida, Applicant's admitted prior art and Wiesman, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the mixing apparatus taught by Dschida in a method to store semen samples in a refrigerator since the device taught by Dschida is for the mixing and resuspension of sediments in biological

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samples, thus making it useful for performing the known mixing of stored semen samples in order to prevent settling of particulates therein. In addition, the device taught by Dschida may incorporate a temperature regulator therein, thus making it possible to maintain the cool refrigerated conditions that Wiesman teaches are necessary for storing and maintaining the viability of semen samples.

14. Claims 13-15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims since none of the prior art of record teaches or fairly suggests a series of connector rods attached to a plurality of racks pivotally mounted on a frame such that the racks are tilted simultaneously.

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Please make note of: Morrison et al, Mawhirt et al, Champseix et al, Yamori et al, Adler, and Witty et al who teach of test tube racks that have tilting mechanisms to mix samples held within the tubes; and Karow, Jr. who teaches of a device for the storage and transportation of semen samples.

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maureen M. Wallenhorst whose telephone number is 571-272-1266. The examiner can normally be reached on Monday-Wednesday from 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden, can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Maureen M. Wallenhorst
Primary Examiner
Art Unit 1743

mmw

March 1, 2004

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